1-10. (CANCELED)

11. (CURRENTLY AMENDED) A hydrodynamic torque converter, comprising a clutch (3) arranged ~~ahead of~~ between a pump impeller wheel (2) and ~~connected to~~ a drive mechanism, a turbine rotor (7) forms a drive output, such that in order to determine torque of the turbine rotor (7) a rotation speed of the turbine rotor (7) is detected by a first speed sensor and transmitted to an electronic control unit, a rotation speed of the pump impeller wheel (2) is transmitted to the electronic control unit by a second speed sensor (13) to the electronic control unit; and

wherein a performance matrix containing characteristic hydrodynamic torque converter values of the torque converter is stored in the electronic control unit, with reference to which, using [[a]] the rotation speed of the pump impeller wheel (2) and [[a]] the rotation speed of the turbine rotor (7), the electronic control unit determines the torque of the turbine rotor (7).

12. (PREVIOUSLY PRESENTED) The hydrodynamic torque converter according to claim 11, wherein the clutch can be operated with clutch slippage.

13. (CANCELED)

14. (PREVIOUSLY PRESENTED) The hydrodynamic torque converter according to claim 11, wherein the second speed sensor (13) is arranged in a positionally fixed component which supports a relative rotational connection with a stator (8) of the torque converter.

15. (PREVIOUSLY PRESENTED) The hydrodynamic torque converter according to claim 11, wherein radially on an inside, the pump impeller wheel (2) has a flange (10) at an axial end of which means enabling the rotation speed to be detected are arranged.

16. (PREVIOUSLY PRESENTED) The hydrodynamic torque converter according to claim 11, wherein means enabling detection of the speed consist of cams arranged parallel to a rotation axis of the torque converter.

17. (PREVIOUSLY PRESENTED) The hydrodynamic torque converter according to claim 11, wherein the second sensor (13) for determining the speed of the pump impeller wheel (2) is arranged inside a converter housing (1), parallel to a rotation axis of the torque converter.

18. (PREVIOUSLY PRESENTED) The hydrodynamic torque converter according to claim 11, wherein the second sensor (13) for determining the speed of the pump impeller wheel (2) is arranged at right-angles to a rotation axis (21) of the torque converter.

19. (PREVIOUSLY PRESENTED) The hydrodynamic torque converter according to claim 11, wherein the second sensor (13) for the speed of the pump impeller wheel (2) is arranged outside a converter housing (1).

20. (PREVIOUSLY PRESENTED) The hydrodynamic torque converter according to claim 11, wherein the clutch (3) is arranged inside one of the converter housing (1) or a transmission housing (16).

21. (CURRENTLY AMENDED) A hydrodynamic torque converter, comprising:

a clutch (3) arranged ~~ahead of~~ between a pump impeller wheel (2) and ~~connected to~~ a drive mechanism;

a turbine rotor (7) forming a drive output,

a first speed sensor detecting the speed of the turbine rotor (7);

a second speed sensor detecting the speed of the pump impeller wheel;

an electronic control unit (2) communicating with the first and second speed sensors to receive the detected speeds of the pump impeller wheel and turbine rotor (7); and

wherein a performance matrix containing characteristic hydrodynamic torque converter values of the torque converter is stored in the electronic control unit, with reference to which, using [[a]] the detected speed of the pump impeller wheel (2) and [[a]] the detected speed of the turbine rotor (7), the electronic control unit determines the torque of the turbine rotor (7).

22. (PREVIOUSLY PRESENTED) The hydrodynamic torque converter according to claim 21, wherein the clutch can be operated with clutch slippage.

23. (PREVIOUSLY PRESENTED) The hydrodynamic torque converter according to claim 21, wherein the second speed sensor (13) is arranged in a positionally fixed component which supports a relative rotational connection with a stator (8) of the torque converter.

24. (PREVIOUSLY PRESENTED) The hydrodynamic torque converter according to claim 21, wherein the pump impeller wheel (2) has a radial inside flange (10) having an axial end defining cams enabling the rotation speed of the pump impeller wheel (2) to be detected.

25. (PREVIOUSLY PRESENTED) The hydrodynamic torque converter according to claim 24, wherein the cams enabling detection of the speed are arranged parallel to a rotation axis of the torque converter.

26. (PREVIOUSLY PRESENTED) The hydrodynamic torque converter according to claim 21, wherein the second sensor (13) for determining the speed of the

pump impeller wheel (2) is arranged inside a converter housing (1), parallel to a rotation axis of the torque converter.

27. (PREVIOUSLY PRESENTED) The hydrodynamic torque converter according to claim 21, wherein the second sensor (13) for determining the speed of the pump impeller wheel (2) is arranged at right-angles to a rotation axis (21) of the torque converter.

28. (PREVIOUSLY PRESENTED) The hydrodynamic torque converter according to claim 21, wherein the second sensor (13) for the speed of the pump impeller wheel (2) is arranged outside a converter housing (1).

29. (PREVIOUSLY PRESENTED) The hydrodynamic torque converter according to claim 21, wherein the clutch (3) is arranged inside one of the converter housing (1) or a transmission housing (16).

30. (CURRENTLY AMENDED) A hydrodynamic torque converter, comprising:

a clutch (3) arranged ~~ahead of~~ between a pump impeller wheel (2) and ~~connected to~~ a drive mechanism;

a turbine rotor (7) forming a drive output,

a first speed sensor detecting the speed of the turbine rotor (7);

a second speed sensor detecting the speed of the pump impeller wheel;

an electronic control unit (2) communicating with the first and second speed sensors to receive the detected speeds of the pump impeller wheel and turbine rotor (7);

a performance matrix containing characteristic hydrodynamic torque converter values of the torque converter is stored in the electronic control unit, with reference to which, using [[a]] the detected speed of the pump impeller wheel (2) and [[a]] the detected speed of the turbine rotor (7), the electronic control unit determines the torque of the turbine rotor (7); and

wherein the pump impeller wheel (2) has an inner axial extension (11) axially depending from the pump impeller wheel (2), the axial extension (11) having an axial end defining cams enabling the rotation speed of the pump impeller wheel (2) to be detected, and the cams are arranged on the axial end of the flange parallel to a rotation axis of the torque converter.